



SOLDER ECOLOY TSC385

Lead-free alloy for electronics

DESCRIPTION

Stannol Ecoloy TSC385 (Sn95.7Ag3.8Cu0.5) is a lead-free solder similar to S-Sn95.5Ag3.8Cu0.7 (DIN EN ISO 9453/alloy no. 713). Stannol Ecoloy TSC385 was designed to substitute the use of tin-lead alloys in all assembly operations of electronics manufacturing. Where lead has already been eliminated from PCBs and component surfaces, a complete lead-free process for manufacturing can be installed, using Stannol Ecoloy TSC385.

Stannol Ecoloy TSC385 has a reduced part of copper.

CHARACTERISTICS

The product offers the following advantages:

- Proven in production use for electronics manufacturing
- Low melting point of high-tin alloys
- Near eutectic alloy (defined melting range)
- Enhanced wetting characteristics

APPLICATION

Some adjustments have to be made on production equipment, e.g. setting of temperature profiles in the reflow equipment. The properties of the resulting solder joints will perform as well as tin/lead solder joints or even better in all respects.

PHYSICAL PROPERTIES AND DATA OF LEAD-FREE ECOLOY ALLOYS COMPARED TO S-Sn63Pb37

GENERAL PROPERTIES	S-Sn63Pb37*	STANNOL ECOLOY TSC385 (Sn95.7Ag3.8Cu0.5)	STANNOL ECOLOY TC (S-Sn99,3Cu0,7)*	STANNOL ECOLOY TSC (S-Sn95,5Ag3,8Cu0,7)*
Melting point, °C:	183	217-223	227	217
Electrical Conductivity, %IACS:	11.9	13	15.6	13
Electrical Resistivity, μΩcm:	14.5	13	12.6	13
Brinell Hardness, HB:	17	15	9	15
Density, g/cm³:	8.4	7.5	7.3	7.5

* Complying with DIN EN ISO 9453

RECOMMENDED CONDITIONS FOR USE

Wave soldering: The use of Ecoloy TSC385 for solder bath application requires operating temperatures of approx. 260 to 280°C. It is necessary to find out the optimum temperatures, which can differ depending on the type of PCB and the types of components. The usage of inert gas brings a considerable extension of the process window. The wetting of the solder will be easier, and there will be no excessive solder on the PCBs when leaving the wave. Moreover the formation of dross will be minimised considerably.

SUPPLY FORMS

Solder Wire (solid and flux cored), Triangular bars, Kg-bars, Ingots with hanging hole

HEALTH AND SAFETY

Before use please read the material safety data sheet carefully and observe the safety precautions described.

NOTICE

The above values are typical and represent no form of specification. The Data Sheet serves for information purposes. Any verbal or written advise is not binding for the company, whether such information originates from the company offices or from a sales representative. This is also in respect of any protection rights of third parties, and does not release the customer from the responsibility of verifying the products of the company for suitability of use for the intended process or purpose. Should any liability on the part of the company arise, the company will only indemnify for loss or damage to the same extent as for defects in quality.